# VARIOUS.

## EBONY STAIN FOR WOOD.

Lauber dissolves extract of logwood in boiling water until the solution indicates 0° Baumé. 5 litres of the solution is then mixed with 2½ litres of pyroligneous iron mordant of 10° and ½ litre of acetic acid of 2°. The mixture is heated for a quarter of an hour, and is then ready for use.

## UTILIZATION OF PLASTER RUBBISH.

Gaudin, 13, Rue de Vaugirard, Paris, patents a method of treating plaster rubbish with carbonate of soda, by which it is rendered fit for use over again. Old plaster, even after it has been reburned, sets too quickly for use. By calcining the rubbish and mixing it with some saline solution instead of pure water this is prevented. Alkaline solutions are best, and of these a solution of carbonate of soda in water is the cheapest. Plaster from old walls and ceilings when thus treated sets at the end of two or three hours, and has all the properties of fresh plaster.

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## IMITATION LEATHER (CUIR LIEGE).

This material is in fact a preparation of cork. Cut in fine sheets, or in strips, and covered on either side with a skin of india-rubber, it wholly loses its friability, whilst retaining every other advantage. Cork thus treated may be wrung out like a dish-cloth, doubled into any shape, and beaten with a mallet, but suffers actually no damage. It is, of course, perfectly water-tight, and the inventor shows (at the Paris Exhibition) buckets of every size, which fold like a handkerchief to put away. Some have been full ever since the opening of the exhibition. But *cuir liége* claims also to be heat proof, a quality that should make it invaluable for ambulance tents, for awnings, and for tropical uses. It may, in short, be said that every purpose served by leather professes to be filled by this new substance, with the further recommendation of leather lightness and impermeability. Its strength is such that a strap 1½ in. wide has been holding a 1,000 lb. weight for the last six weeks. In thicker sheets veneered with fancy wood, it is suggested as a material for carriage-building. Most elegant boots, as well as hats and portmanteaus, all made of it, are shown. It is also claimed that military accoutrements, knapsacks, and straps, belts, and pouches, &c., can be lightened 70 per cent., rendered water and heat proof, and manufactured at 25 per cent. below present cost as well, by substituting *cuir liége* for ordinary leather. *Furniture Gazette.*

## AMERICAN PORCELAIN.

There are several industries belonging to the useful arts in which America has scarcely made an effort to compete with the Old World. One reason of this backwardness is probably owing to the great perfection attained by foreign manufacturers, and the difficulty in securing a market in opposition to them. We are pleased to give prominence to the fact, that in one of the finest of the useful arts — one in which Europe has long enjoyed a monopoly of our trade — there is at least one concern in our country that has achieved a flattering success and secured by the excellency of its wares a prestige and business that the combined efforts of foreign producers are not sufficient to overturn. We allude to the manufacture of porcelain or China ware for household and other purposes, and the establishment referred to is the Union Porcelain Works, at Greenport, N.Y., owned and conducted by Messrs. Thos. C. Smith and Son. The origin of a similar enterprise in the United States may date back before the starting of these works in 1865 by Mr. Thos. C. Smith, but its successful prosecution rests with him as the first to demonstrate the practicability of furnishing fine French table ware and other porcelain articles, formerly derived altogether from abroad by American artisans, and within our own borders. The Union Porcelain works is the only factory of its kind in America. It covers about an acre of ground at 300 Eckford-street, occupied by several substantial brick buildings furnished with intricate machinery. The working force consists of 125 hands. Many different varieties of porcelain goods are produced here, embracing a full line of table ware for hotels, steamships and family use, also all kinds of porcelain hardware trimmings. In spite of every difficulty, the prejudice in favour of articles of foreign fabrication being one of the strongest, Mr. Smith persevered until he has brought the art to such a point of perfection as to produce not only as good an article as can be imported for domestic use, but in many cases a great deal better — at least that which appertains to the wants of our domestic trade. Improved wares of various patterns, such as foreign manufacturers have failed to supply our market, have been successfully produced here at far less cost than the common importation. The industry in this country is entirely a private enterprise, and has never received Government patronage of any kind. In this respect it stands alone, for the large factories of Europe have been fostered and pensioned by rulers and Governments for more than a century. In this factory may be seen some of the most beautiful, substantial and tastefully decorated household China to be found anywhere, not excepting the warehouses of the largest importers. The firm are making preparations to be suitably represented at the Centennial Exhibition with such a display of their productions as will do credit both to themselves and to Americain skill and industry, in competition with the choicest wares from the several nations of the world, there to be exhibited. In conclusion, we will call attention to the fact, that all the kaolin used in the manufacture of porcelain has to be imported, while without doubt there is plenty of it to be found in this country. A tariff of five dollars a ton is imposed on the article, and unless some effort is made to mine and prepare it for market by our own citizens, the tariff should be removed and kaolin admitted free. *Americain Manufacturer.*

## CUTTING AND ENGRAVING ON GLASS.

The engravers sit at a long bench, on which lathes, specially adapted to the work, are fixed at intervals. Unlike wood or copper-plate engraving, where the material engraved upon is fixed and the tool moved over the surface, the operation in glass engraving is reversed, for here the tool (or what may be termed the *axis* of the tool) is fixed, and made to revolve by a treadle, as in ordinary lathes, while the glass vessel to be engraved, is held by the operator, pressed into contact with the cutting edge of the tool, and moved adroitly about to produce the pattern required. The tool is kept moistened, by a very simple contrivance, with a mixture of emery and water. The extreme accuracy acquired by constant practice is somewhat astonishing to a stranger. Here, as in all similar arts, there must exist the most perfect sympathy and harmony of action between the eye and hand. A variety of tools are used by the engraver on glass, each one adapted to the description of line or effect required to be produced. The arrangements for cutting and polishing glass in this department are of a very simple character. The polishing wheels are driven by bands from a shaft connected with an engine. Each wheel has a trough beneath, and a reservoir (usually of a conical shape) above. The reservoir contains a mixture of water and sand or other material, according to the stage of progress. At the first stage the rough cutting is performed by iron wheels, over which fall jets of sand and water. The glass, when it leaves this wheel, has a very rough and frosted appearance on the cut surfaces. It is passed on to other wheels for finer finish. On a wheel of willowwood, moistened with pumice and rottenstone, it gradually assumes a clear and bright transparency and it is then passed on to the cork wheel, where it is treated with "putty" powder, a mixture of lead and block-tin, and is worked up to a fine lustrous polish.

*American Artisan.*